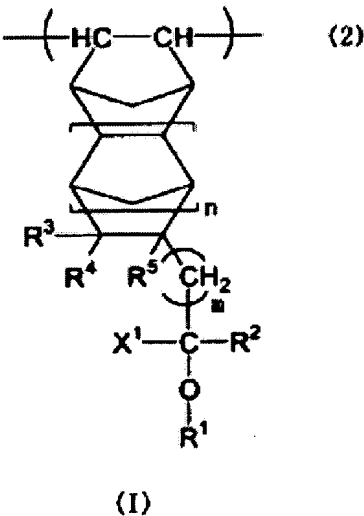


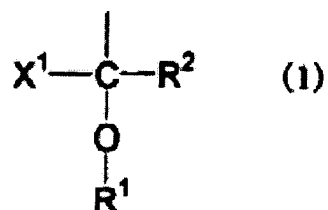
1

a



a

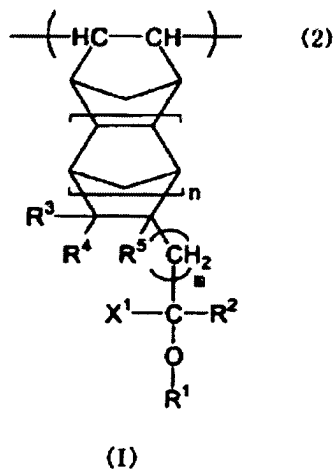
a



wherein R<sup>1</sup> represents a hydrogen atom, a monovalent acid-labile group, an alkyl group having 1-6 carbon atoms which does not have an acid-labile group, or an alkylcarbonyl group having 2-7 carbon atoms which does not have an acid-labile group, X<sup>1</sup> represents a linear or branched fluorinated alkyl group having 1-4 carbon atoms, and R<sup>2</sup> represents a hydrogen atom or a linear or branched alkyl group having 1-10 carbon atoms.

21. The radiation-sensitive resin composition according to Claim 20, wherein R<sup>2</sup> is hydrogen or a methyl group.

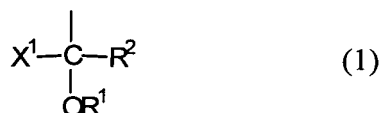
22. The radiation-sensitive resin composition according to Claim 20, wherein the acid-labile group-containing resin comprises a recurring unit (I) represented by the following formula (2):



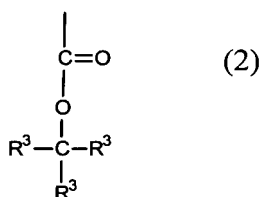
wherein each of  $R^3$ ,  $R^4$ , and  $R^5$  individually represent a hydrogen atom or a linear or branched alkyl group having 1 - 4 carbon atoms, a monovalent oxygen-containing polar group, or a monovalent nitrogen-containing polar group, n is an integer of 0 - 2, and m is an integer of 0 - 3.

23. A radiation-sensitive resin composition comprising:

(A) an acid-labile group-containing resin containing a recurring unit of the following formula (1),

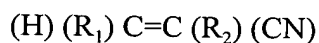


wherein  $R^1$  represents a hydrogen atom or a monovalent acid-labile group,  $X^1$  represents a linear or branched fluoroalkyl group having 1-4 carbon atoms, and  $R^2$  represents a hydrogen atom, a linear or branched alkyl group having 1-10 carbon atoms, or a linear or branched fluoroalkyl group having 1-10 carbon atoms, and a recurring unit represented by the following formula (2),



wherein any two of the  $R^3$  groups form, in combination and together with the carbon atom with which these groups bond, a divalent alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof with the remaining  $R^3$  group being a linear or branched alkyl group having 1-4 carbon atoms, a monovalent alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof,

the resin not containing a recurring unit derived from at least one ethylenically unsaturated group having the structure,

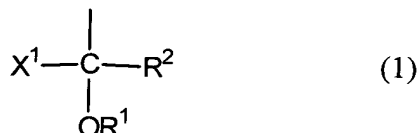


wherein  $R_1$  is a hydrogen atom or a CN group,  $R_2$  is an alkyl group having 1-8 carbon atoms, a hydrogen atom, or a  $COOR_3$  group wherein  $R_3$  is an alkyl group having 1-8 carbon atoms or hydrogen atom, and

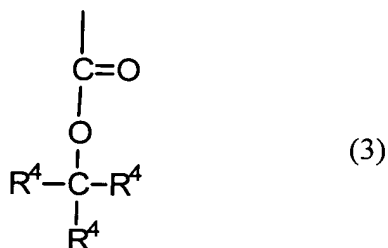
(B) a photoacid generator.

24. A radiation-sensitive resin composition comprising:

(A) an acid-labile group-containing resin containing a recurring unit of the following formula (1),

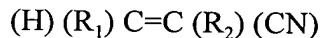


wherein  $R^1$  represents a hydrogen atom or a monovalent acid-labile group,  $X^1$  represents a linear or branched fluoroalkyl group having 1-4 carbon atoms, and  $R^2$  represents a hydrogen atom, a linear or branched alkyl group having 1-10 carbon atoms, or a linear or branched fluoroalkyl group having 1-10 carbon atoms, and  
a recurring unit represented by the following formula (3),



wherein at least one  $R^4$  group in the formula (3) is a monovalent alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof and the remaining  $R^4$  groups are individually a linear or branched alkyl group having 1-4 carbon atoms,

the resin not containing a recurring unit derived from at least one ethylenically unsaturated group having the structure,

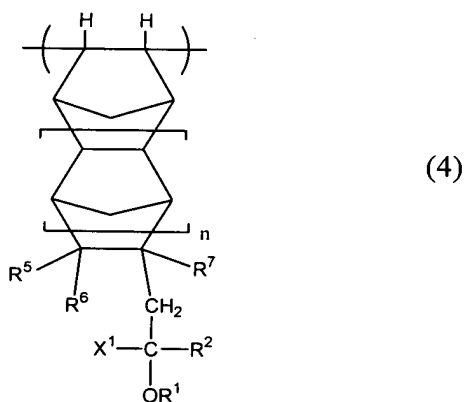


wherein  $R_1$  is a hydrogen atom or CN group,  $R_2$  is an alkyl group having 1-8 carbon atoms, a hydrogen atom, or a  $COOR_3$  group wherein  $R_3$  is an alkyl group having 1-8 carbon atoms or hydrogen atom, and

(B) a photoacid generator.

25. A radiation-sensitive resin composition comprising

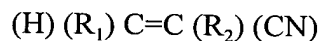
(A) an acid-labile group-containing resin having a recurring unit of the following formula (4),



wherein  $R^1$  represents a hydrogen atom or a monovalent acid-labile group,  $X^1$  represents a linear or branched fluoroalkyl group having 1-4 carbon atoms, and  $R^2$  represents a hydrogen atom, a linear or branched alkyl group having 1-10 carbon atoms, or a linear or branched fluorinated alkyl group having 1-10 carbon atoms, and  $R^5$ ,  $R^6$ , and  $R^7$  individually represent a hydrogen atom, a

linear or branched alkyl group having 1-4 carbon atoms, a monovalent oxygen-containing polar group, or a monovalent nitrogen-containing polar group, and n is an integer of 0-2,

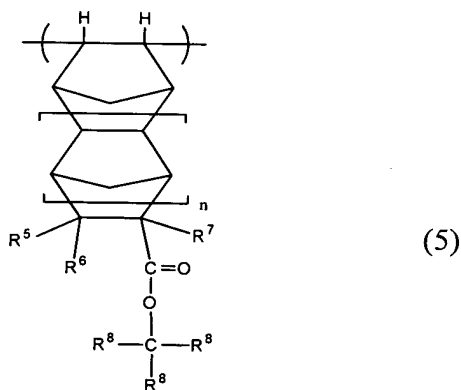
the resin not containing a recurring unit derived from at least one ethylenically unsaturated group having the structure,



wherein  $R_1$  is a hydrogen atom or a CN group,  $R_2$  is an alkyl group having 1-8 carbon atoms, a hydrogen atom, or a  $COOR_3$  group wherein  $R_3$  is an alkyl group having 1-8 carbon atoms or hydrogen atom, and

(B) a photoacid generator.

26. The radiation-sensitive resin composition according to Claim 25, comprising (A) an acid-labile group-containing resin having the recurring unit of the formula (4) and a recurring unit of the following formula (5),



wherein  $R^5$ ,  $R^6$  and  $R^7$  individually represent a hydrogen atom, a linear or branched alkyl group having 1-4 carbon atoms, a monovalent oxygen-containing polar group, or a monovalent nitrogen-containing polar group, n is an integer of 0-2, and wherein each  $R^8$  individually represents a linear or branched alkyl group having 1-4 carbon atoms or a monovalent alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof, or any two of the  $R^8$  groups form, in combination and together with the carbon atom with which these groups bond, a divalent

alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof with the remaining  $R^8$  group being a linear or branched alkyl group having 1-4 carbon atoms or a monovalent alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof,

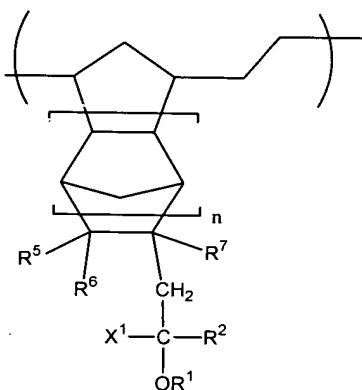
wherein all recurring units forming the resin are derived from a norbornene derivative or a tetracyclododecene derivative, and

(B) a photoacid generator.

27. A radiation-sensitive resin composition comprising,

(A) an acid-labile group-containing resin having a recurring unit of the following formula

(6),



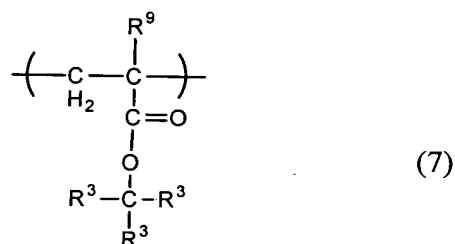
(6)

wherein  $R^1$  represents a hydrogen atom or a monovalent acid-labile group,  $X^1$  represents a linear or branched fluoroalkyl group having 1-4 carbon atoms,  $R^2$  represents a hydrogen atom, a linear or branched alkyl group having 1-10 carbon atoms, or a linear or branched fluorinated alkyl group having 1-10 carbon atoms, and  $R^5$ ,  $R^6$ , and  $R^7$  individually represent a hydrogen atom, a linear or branched alkyl group having 1-4 carbon atoms, a monovalent oxygen-containing polar group, or a monovalent nitrogen-containing polar group, and  $n$  is an integer of 0-2,

the resin being synthesized by metallocene polymerization and a hydrogenation reaction, and

(B) a photoacid generator.

28. The radiation-sensitive resin composition according to Claim 23, comprising (A) an acid-labile group-containing resin having a recurring unit of the formula (1) and a recurring of the following formula (7),

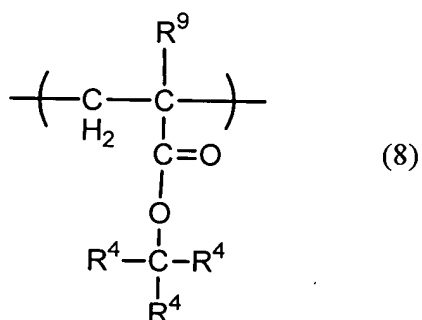


a wherein any two of R<sup>3</sup> groups form, in combination and together with the carbon atom with which these groups bond, a divalent alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof, with the remaining R<sup>3</sup> group being a linear or branched alkyl group having 1-4 carbon atoms or a monovalent alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof and R<sup>9</sup> represents a hydrogen atom or methyl group, and

(B) a photoacid generator.

29. The radiation-sensitive resin composition according to Claim 23, comprising

(A) an acid-labile group-containing resin having a recurring unit of the formula (1) and a recurring unit of the following formula (8),



wherein at least one R<sup>4</sup> group is a monovalent alicyclic hydrocarbon group having 4-20 carbon atoms or a derivative thereof and each of the remaining R<sup>4</sup> groups individually represents a linear